IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 29-30, 35, 38-39, and 41 in accordance with the following:

1-21. (cancelled)

22. (previously presented) A method for designing a technical system having a predetermined set of target functions which are dependent on parameters, comprising:

weighting each individual target function with a weighting factor;

solving an equation system in a variable space to produce operating points in a solution space, the equation system having the parameters and the weighting factors as variables, the equation system being solved by a predictor-corrector method comprising:

generating a first operating point by determining a predictor as a stochastic variable in the variable space; and

after generating the first operating point, generating a second operating point using a corrector method; and

using the operating points to design the technical system.

23. (previously presented) The method as claimed in claim 22, wherein the predictor is determined by random numbers.

24. (previously presented) The method as claimed in claim 23, wherein the random numbers are normally distributed.

25. (previously presented) The method as claimed in claim 22, wherein the stochastic variable relates to a stochastic process Z_t which satisfies the following equation:

$$dZ_t = \varepsilon P(Z_t)dB_t$$

where

P(z) is a projection matrix onto a space tangential to the solution space in a valid operating point z,

ε is a scaling factor, and

$B_t, t \in \Re_0^+$ is a Brownian movement in the variable space.

26. (previously presented) The method as claimed in claim 22, wherein pareto-optimal points are determined as the operating points.

27. (previously presented) The method as claimed in claim 22, wherein the operating points are points with positive weighting factors in the solution space.

28. (previously presented) The method as claimed in claim 22, wherein the operating points satisfy one or more auxiliary conditions, with each auxiliary condition being represented by a further variable of the equation system in the variable space.

29. (currently amended) The method as claimed in ~~claim~~ claim 28, wherein the auxiliary conditions are equality auxiliary conditions and/or inequality auxiliary conditions.

30. (currently amended) The method as claimed in ~~claim~~ claim 29, wherein inequality auxiliary conditions are transformed into equality auxiliary conditions by a slack variable.

31. (previously presented) The method as claimed in claim 22, wherein the solution space is a submanifold in the variable space.

32. (previously presented) The method as claimed in claim 22, wherein the first operating point is generated by a weighting method.

33. (previously presented) The method as claimed in claim 22, wherein in generating the first operating point, plane tangential to the solution space is determined and the predictor is determined in said plane.

34. (previously presented) The method as claimed in claim 22, wherein if a negative predictor associated with a negative weighting factor occurs, a new predictor is determined by a reflection at a subplane of the solution space having the operating points.

35. (currently amended) The method as claimed in ~~claim~~ claim 34, wherein

a point of intersection of a trajectory which runs between the first operating point and the

negative predictor with the subplane of the solution space is determined;

a tangential component of a vector spanned by the point of intersection and the negative predictor is determined at a subplane of the solution space, the weighting factor for the negative predictor now being equal to zero;

a normal component, associated with the tangential component, of the vector spanned by the point of intersection and the negative predictor is determined;

the new predictor is determined as twice the difference of the normal component from the negative predictor.

36. (previously presented) The method as claimed in claim 22, wherein the corrector method is a Newtonian method.

37. (previously presented) The method as claimed in claim 22, wherein the operating points are determined by iterations of the predictor-corrector method, with the second operating point of a preceding iteration step being used in a current iteration step as the first operating point of the predictor-corrector method.

38. (currently amended) The method as claimed in ~~claim~~ claim 37, wherein the iterations are terminated by an abort condition.

39. (currently amended) The method as claimed in ~~claim~~ claim 38, wherein the abort condition is satisfied when a predetermined number of operating points has been determined and/or a predetermined time limit has been reached.

40. (previously presented) A system for designing a technical system having a predeterminable set of target functions which are dependent on parameters, comprising;

a weighting unit to weight each individual target function with a weighting factor;

a processor to solve an equation system having the parameters and the weighting factors as variables in a variable space, the solutions of the equation system forming operating points of a solution space in the variable space, the operating points being determined by a predictor-corrector method comprising:

generating a first operating point by determining a predictor as a stochastic variable in the variable space; and

after generating the first operating point, generating a second operating point in a

corrector step; and

an output unit to output the operating points for the design of the technical system.

41. (currently amended) The system as claimed in ~~claim~~ claim 40, further comprising a random number generator for generating the stochastic variable.

42. (previously presented) A computer readable medium on which is stored a computer program to perform a method for designing a technical system having a predetermined set of target functions which are dependent on parameters, the method comprising:

weighting each individual target function with a weighting factor;

solving an equation system in a variable space to produce operating points in a solution space, the equation system having the parameters and the weighting factors as variables, the equation system being solved by a predictor-corrector method comprising:

generating a first operating point by determining a predictor as a stochastic variable in the variable space; and

after generating the first operating point, generating a second operating point in a corrector step; and

using the operating points to design the technical system.